Five Main Breeds of Dairy Cattle

Breed	Ayrshire	Brown Swiss	Guernsey	Holstein-Friesian	Jersey
Color	Red and white spotted	Brownish-gray	Orange, fawn, and white spotted	Black and white spotted	Light to dark grayish-fawn
Place of origin	Scotland	Switzerland	Isle of Guernsey	The Netherlands	Isle of Jersey
Rank in size	3	2	4	1	5
Average per cent butterfat of milk	4.0	4.0	4.7	3.7	5
Average annual yield of milk	6,500 lbs. (2,950 kg)	7,000 lbs. (3,200 kg)	5,750 lbs. (2,608 kg)	8,500 lbs. (3,860 kg)	5,250 lbs. (2,381 kg)
Rank in number registered in United States	4	5	2	1	3
National registry association formed	1875	1880	1877	1885	1868

Dairy Cattle

The five most important breeds of milk cows in the United States are the *Holstein-Friesian, Jersey, Guernsey, Ayrshire,* and *Brown Swiss.* All breeds are [illegible] good milk producers, but some breeds, such as the Holstein-Friesian, produce more milk than others.

The cows brought to America in colonial days produced little milk. Dairy farmers increased the milk output and butterfat content by improving herds. The butterfat content is important because butterfat is used to make butter. The average annual output of milk per cow increased from 5,314 pounds (2,410 kilograms) in 1950 to about 10,270 pounds (4,658 kilograms) in the early 1970's. Milk production is measured by weight because farmers are paid for their milk by weight at creameries and receiving stations. One gallon (3.8 liters) of milk weighs 8.6 pounds (3.9 kilograms).

Dairy cows normally give milk for about [illegible] years, but some still produce milk at the age of 20 or older. When cows no longer give milk, they usually are sent to a livestock market for slaughter. Dairy cattle provide about two-fifths of our beef and veal.

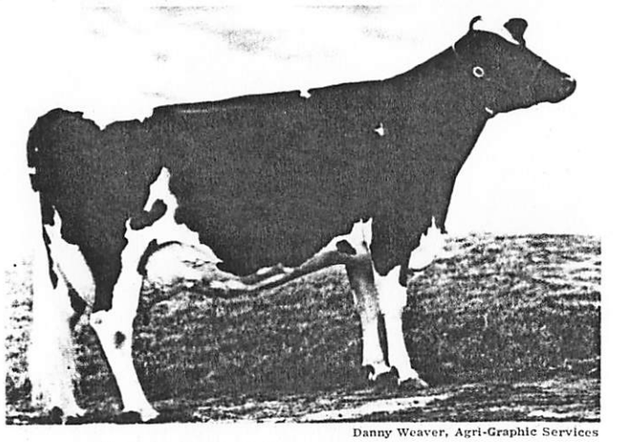
Leading Dairy Cattle States and Provinces

Number of dairy cattle in the state or province on Jan. 1, 1976*

Wisconsin	2,526,000
New York	1,261,000
Minnesota	1,246,000
Quebec	1,152,000
California	1,130,000
Pennsylvania	927,000
Ontario	855,000
Michigan	620,000
Ohio	537,000
Iowa	530,000

*State figures exclude all beef cattle over 500 pounds (230 kilograms) and all cattle—both beef and dairy—under 500 pounds. Province figures exclude all beef cattle over 1 year in age and all cattle—both beef and dairy—under one year.

Sources: U.S. Department of Agriculture; Statistics Canada.



Danny Weaver, Agri-Graphic Services

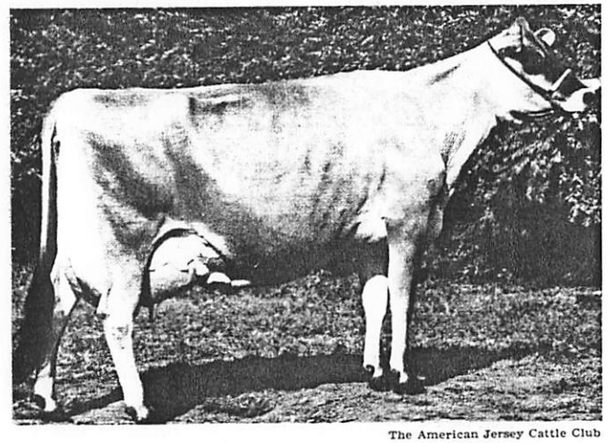
Holstein-Friesian

Holstein-Friesian cattle, usually called *Holsteins*, are identified by their black-and-white coats. Some Holsteins are nearly all black or all white. A few are red and white. Holsteins are the largest dairy breed. They have broad hips and long, deep *barrels*, or body trunks. Their horns slant forward, but curve inward.

There are more Holsteins in the United States than any other dairy breed. Many farmers favor them because a Holstein cow produces more milk than other breeds. However, their milk contains less fat than that of other breeds.

Holsteins probably were developed from a strain of black-and-white cattle found in the province of Friesland in The Netherlands. Cattle raisers of Schleswig-Holstein in Germany also helped develop the breed.

Holsteins were brought to the United States in 1795. They are now raised in every state. Holsteins are also popular in Canada. The Holstein-Friesian Association of America has headquarters in Brattleboro, Vt.



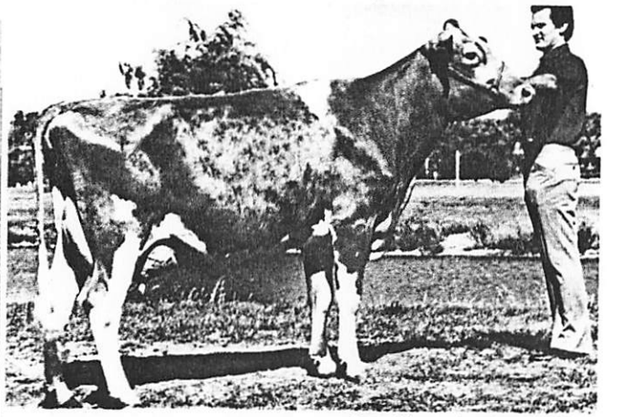
The American Jersey Cattle Club

Jersey

Jersey cattle range in color from gray to dark fawn, or reddish-brown. Some appear almost black. The Jersey is the smallest major dairy breed. Its broad face is unusually short from its forehead to its nostrils. The small horns curve inward.

Jersey cows produce less milk than the four other major breeds, but their milk contains the most butterfat. A thick mass of cream rises to the top of a container of Jersey milk.

Jersey cattle came from the tiny British island of Jersey in the English Channel. They were brought to the United States in 1850. Jerseys thrive in all sections of the country. Many are raised in Canada. The American Jersey Cattle Club has headquarters in Columbus, Ohio.



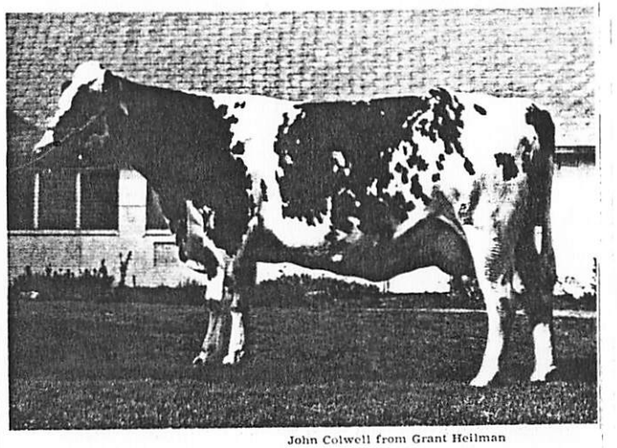
Danny Weaver, Agri-Graphic Services

Guernsey

Guernsey cattle are slightly larger than Jerseys. The Guernsey's fawn-colored coat is spotted with white markings. The Guernsey has a long head. A white shield often appears on its broad forehead. The horns curve upward and forward.

Guernseys produce a little more milk than Jerseys, but the rich milk of the Guernsey ranks second to that of the top-ranking Jersey in butterfat content.

Guernseys probably originated in France when breeders crossed the red brindle cattle of Normandy with the small brown-and-white cattle of Brittany. Guernseys were brought to the United States in 1831 from the British island of Guernsey, near Jersey. They are raised in every state, as well as in Canada. The American Guernsey Cattle Club has headquarters in Peterborough, N.H.

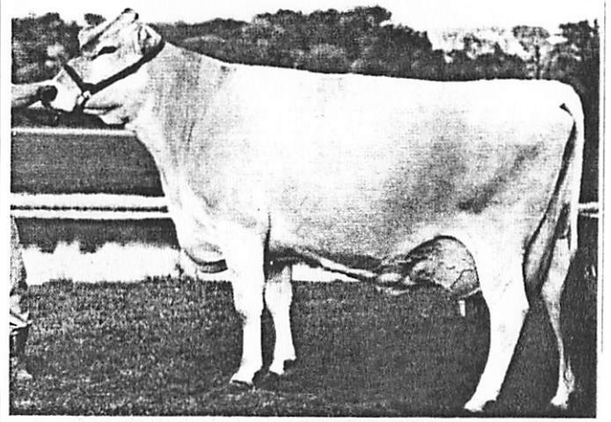


John Colwell from Grant Heilman

Ayrshire

Ayrshire cattle are red and white or brown and white. Some are nearly all red or all white. The Ayrshire's long curving horns give it an impressive appearance. Its body is sturdy, but somewhat lean. Ayrshire milk production ranks between Brown Swiss and Guernsey.

Ayrshires came from the hilly country of Ayr in southwest Scotland. They are more rugged than other breeds, and they thrive in hilly country. Ayrshires were brought to the United States in 1822. They later spread to the Pacific Coast, and are also popular in Canada. The Ayrshire Breeders' Association has headquarters in Brandon, Vt.



The Brown Swiss Cattle Breeders' Association

Brown Swiss

Brown Swiss may be light brown, dark brown, or brownish-gray. A light gray stripe may run along the back. The nose, horn tips, and tail switch are black. Brown Swiss are larger than most dairy cattle. The horns slant forward and upward.

Brown Swiss milk production ranks second only to that of Holsteins. The milk is pure white, and is rich in nonfat solids, minerals, and *lactose*, or milk sugar. These qualities make the milk of Brown Swiss cattle excellent for cheese.

Like the Holstein, the Brown Swiss is one of the oldest breeds of dairy cattle. It was first raised in the *canton* (state) of Schwyz in Switzerland.

Brown Swiss cattle were brought to New England in 1869. They now are raised throughout the United States and also in Canada. The Brown Swiss Cattle Breeders' Association of America has headquarters in Beloit, Wis.

Other Dairy Cattle. *Dutch Belted* cows are black, with a [illegible] belt of white around the middle. Their milk co[illegible]s about as much butterfat as that of the Brown Swiss and Ayrshire. Dutch Belted cows were brought to the United States from The Netherlands in the late 1830's. This breed is raised mostly in the eastern United States.

French Canadian cattle are a small, dark brown breed, much like the Jersey and the Guernsey. They are raised mostly in Quebec. The milk of these cows is rich in butterfat. French Canadian cattle are not common in any sections of the United States.

Kerry cattle, a black breed, originated in Ireland. They are closely related to *Dexter* cattle, which are small and have short legs. Dexters produce about one half Dexter offspring, one fourth Kerry-type offspring, and one fourth abnormal "bulldog" calves that die at birth. Kerry and Dexter cattle are not commonly raised in the United States.

Red Sindhi is a red, Brahman-type of cattle that originated in the province of Sind in Pakistan. It produces more milk than the Brahman, and has been crossed with other breeds in the United States to develop cattle with greater resistance to high temperatures.

Dual-Purpose Cattle

Some cattle can be raised for beef or kept as dairy cattle. They are called *dual-purpose cattle*. These animals have many of the qualities of beef cattle, but they also are good milk producers. The most important dual-purpose breeds are the *Milking Shorthorn* and the *Red Poll*. Many farmers raise dual-purpose breeds only for meat. These breeds produce calves that grow rapidly and can be slaughtered for veal or baby beef sooner than some beef cattle breeds.

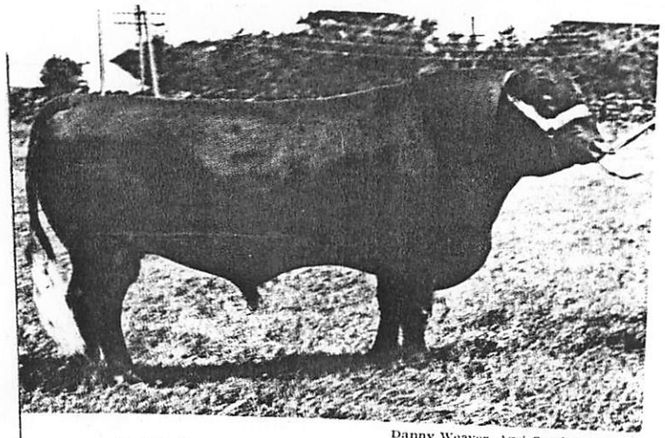
Dairy cattle provide much of our beef and veal. But they are not classified as dual-purpose cattle, because they are bred and raised chiefly for milk.

Milking Shorthorns produce large amounts of milk and beef. They are popular with farmers who do not specialize either in fattening beef cattle for market or in producing milk for big cities.

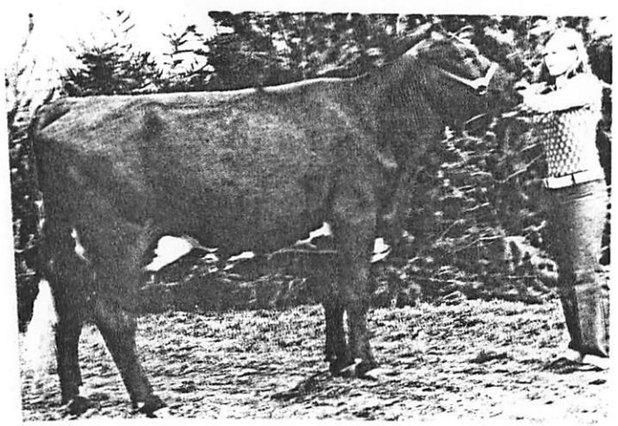
Milking Shorthorns are red, white, roan, or red and white spotted. They were brought to Virginia and Maryland from England in 1783. Milking Shorthorns are raised in the Middle West and the eastern and southeastern sections of the United States. The American Milking Shorthorn Society has headquarters in Springfield, Mo.

Red Polls are red, hornless cattle. Horned Norfolk cattle were crossed with polled Suffolk to produce Red Polls. Red Polls are smaller than Shorthorns and are less numerous than Milking Shorthorns.

The breed originated in the counties of Norfolk and Suffolk in England. Red Polls were brought to the United States in 1873. Most of the Red Polls in the United States are raised on farms in the Middle West. The Red Poll Cattle Club of America has its headquarters located in Lincoln, Nebr.



Red Poll Danny Weaver, Agri-Graphic Services



Milking Shorthorn Danny Weaver, Agri-Graphic Services

Breeding and Care of Cattle

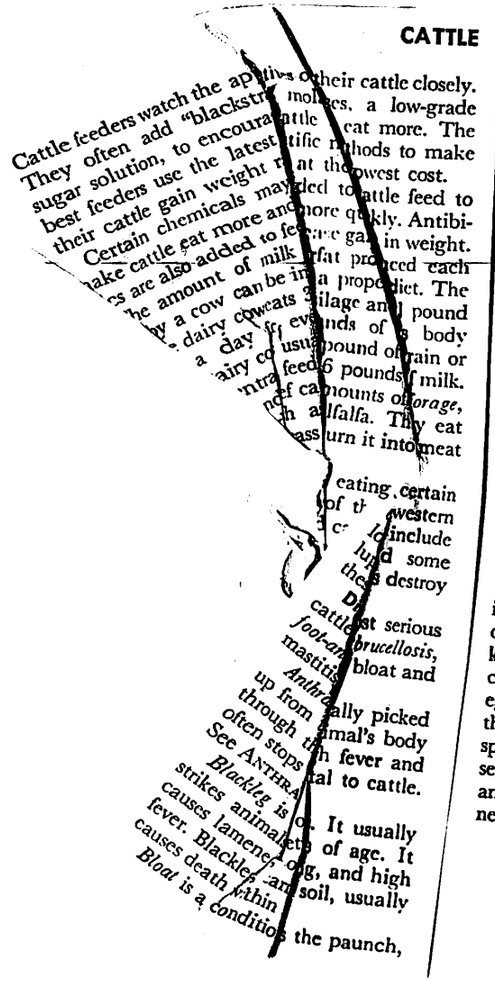
Breeding. Cattle breeders select and mate the [illegible] types of cattle for a special purpose, such as [illegible] large quantities of milk or high-grade beef. [illegible] mate the best of the offspring until, after [illegible] ations, the cattle possess the desired [illegible]. In this way, beef cattle have been bred to mature [illegible] thus can be sold at a greater profit than [illegible] they had to be fattened over a longer time. [illegible] breeding has increased milk output and the percentage of butterfat.

Heifers usually are mated when they are between [illegible] and 27 months old. A cow carries her calf in her body for nine months before it is born. Cows usually have one calf every year. Sometimes twins are born. Bulls may start breeding at the age of 1 year, but they are most active between 2 and 6 years of age.

A cow cannot produce milk unless it has given birth to a calf. Such a cow is known as a "fresh" cow. After the birth of the calf, the cow usually gives milk for about 10 months. A cow that does not give milk is called a "dry cow."

Feeding. Feeding methods have greatly improved the production of both meat and milk. Cattle are hearty eaters. Here is a recommended daily diet for fattening a 2-year-old beef steer: 25 pounds (11 kilograms) of corn or sorghum silage, 4 pounds (1.8 kilograms) of red clover hay, 14 pounds (6 kilograms) of corn or ground grain sorghum, and 1½ pounds (0.57 kilogram) of linseed meal or cottonseed meal.

The fattening diet of younger cattle contains more grain and less *roughage*, or coarse feed such as hay.



CATTLE

causing the animal to stagger and gasp for breath. Cattle may be stricken with bloat after grazing in moist pastures. A change in feed when cattle are very hungry also may cause them to bloat.

Brucellosis, or *Bang's Disease*, attacks the lymph glands, udders, and reproductive organs of cows. Cattle pick up the brucellosis germ from dirty feed or other objects. Cows with brucellosis often cannot bear calves. See BANG'S DISEASE.

Foot-and-Mouth Disease is caused by a virus. The disease causes lameness and reduces milk output. The United States Department of Agriculture does not allow the import of cattle from countries where the disease is known to exist. See FOOT-AND-MOUTH DISEASE.

Mastitis is the most costly disease of dairy cattle in the United States. The disease is caused by germs that enter the udder. The germs do the greatest damage when the udder is injured or exposed to cold, wet surfaces. The udder then becomes hard, swollen, and painful. Mastitis causes a drop in milk production and quality. Antibiotics can be used effectively in treatment.

Insects spread such diseases as *anaplasmosis*, which is similar to malaria. *Texas fever* is an infectious disease caused by the cattle tick (see CATTLE TICK). Many kinds of flies annoy cattle. Some flies merely cause cattle to produce less meat or milk. But heel flies lay eggs on the heels of cattle. The larvae work up through the body and bore holes in the hide. Cattle owners spray cattle with insecticides to kill flies and other insects. Veterinarians use modern vaccines, drugs, and antibiotics to help keep cattle healthy and to cure sickness.

Dwarf Cattle are undersized animals that never develop fully. They are stunted at birth, and many die soon after they are born. Cattle owners have become alarmed because more and more dwarf cattle have appeared in purebred herds. Dwarfs appear in every major breed. Some breeders believe that efforts to develop better beef cattle may lead to dwarfism. Some bulls with otherwise desirable qualities seem to produce many dwarfs.

Raising and Marketing Cattle

Most beef calves are born on Western ranches in the spring. The young spend the summer with their mothers on fenced pastures, or on an open range. Most calves are *branded* (marked) with a hot iron to show ownership (see RANCHING [picture: Famous Ranch Brands]). In the fall, the calves are *weaned* (taken from their mothers).

Feeder Cattle. The rancher sells the weaned calves to farmers, or *feeders*, in the Middle West, on the West Coast, or elsewhere. Such calves, called *feeder cattle*, are raised in *feed lots*. A feed lot is an enclosed area where cattle are fed special feed to fatten them for market. The farmer then sends them to a *stockyard* (market). Meat packers at the market buy cattle for slaughter. The largest stockyards are in Omaha, Nebr.; South St. Paul, Minn.; Oklahoma City, Okla.; and Sioux City, Iowa. See MEAT PACKING.

Ranchers sometimes send their calves directly to a market instead of selling them to farmers. Farmers, in turn, may buy feeder cattle from a carefully chosen market instead of from a rancher. The farmers fatten such calves, then sell them back to a market at a profit.

A farmer usually fattens feeder cattle for 90 to 180 days. The farmer tries to sell them when market con-